

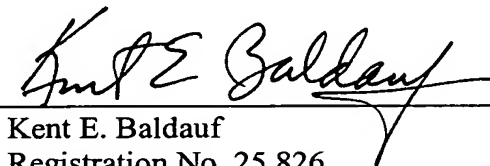
Attached hereto is a marked-up version of the changes made to the specification by the current amendment. The attachment is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE".

Examination and allowance of pending claims 1-20 are respectfully requested.

Respectfully submitted,

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201220.09169001

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the specification:

Paragraph beginning at page 2, line 26, has been amended as follows:

Japanese Pat. Laid-Open Publication No. Hei. [5-3052668] 5-305266 discloses use of a urethane resin in forming a non-continuous coat highly resistant to corrosion. A simple combination of a fluorine compound and polyethylene is used as a lubricant and applied to a steel plate by use of an electrostatic method. However, an electrostatic method results in non-continuous films which are unfavorable in terms of corrosion resistance.

Paragraph beginning at page 6, line 15, has been amended as follows:

In accordance with the third embodiment of the present invention, there is provided a surface treatment of chromated, electroplated steel plates, comprising the steps of: coating, on [an] a zinc-electroplated steel plate chromated at a chrome amount of 4-200 mg/m², [the] an aqueous lubricant urethane resin composition at a dry coating thickness of 0.5-5.0 μ m, baking the steel plate at a steel temperature of 110-200 °C, and quenching the coated steel plate in water.

Paragraph beginning at page 14, line 16, has been amended as follows:

With reference to Fig. 1, there is shown a structure of a thing film coated on a chromated, electroplated steel plate. In the fluorine resin-modified polyethylene type wax, fluorine resin type wax particles with a diameter of 0.1-1.5 μ m surround and bind to globular ethylene type wax particles which are low in specific gravity. Therefore, the fluorine resin-modified polyethylene type wax is so low in specific gravity that it has sufficient floatability even on the wetted film. In addition, the fluorine resin-modified polyethylene type wax sufficiently exerts the properties characteristic to fluorine resins by virtue of the ball bearing effect. Thus, even after

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being subjected to deep machining processes, the steel plate can maintain its surface [clean] cleanliness by virtue of the fluorine resin-modified polyethylene type wax. In regard to the compatibility with aqueous solutions, the polyethylene type wax preferably ranges, in molecular weight, from 1,500 to 3,000 with a diameter of 0.05-1.0 μm .

Paragraph beginning at page 15 line 3, has been amended as follows:

Because of [being] its excellent [in] compatibility with and dispersability in the binder resin of the lubricant resin solution, the polyethylene type wax is homogeneously distributed in the resin film, unlike the fluorine-modified polyethylene type wax which is prevalently distributed in the upper portion of the film as shown in Fig. 1. Thus, the polyethylene type wax guarantees the uniform processability of the steel plate. In addition, its high melting point (120-130 °C) maintains the wax even when the mold temperature is increased, enabling the steel plate to be continuously processed.

Paragraph beginning at page 17, line 5, has been amended as follows:

With its ability to be coated on steel plates to [the] a thickness as thin as 0.5-5.0 μm , the aqueous urethane resin composition thus obtained is superior in terms of thin film coatability, corrosion resistance, film flexibility, adhesiveness to steel plates, surface friction property, chemical resistance, and overcoatability as well as in terms of compatibility with various additives which are usually used in conventional coating materials for steel plates.

Paragraph beginning at page 18, line 28, has been amended as follows:

The following [was] is a description of the urethane resin composition preparation set forth in [Example] Examples 1-5.

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Paragraph beginning at page 22, line 23, has been amended as follows:

d. Impact Resistance: a ball type pendulum weighing 1 kg was allowed to fall down to a cured, cross-cut sample from a height 50 cm [away from] above the sample, after which a tape was attached to the backside of the sample and removed to evaluate the coating adhesion.

In the claims:

Claim 3 has been amended as follows:

3. (Amended) The method as set forth in claim 1 [or 2], wherein said polyester polyol is used at an amount of 120-130 parts by weight based on the weight of the prepolymer reactants.

Claim 4 has been amended as follows:

4. (Amended) The method as set forth in claim 1 [or 2], wherein said diisocyanate is used at an amount of 35-40 parts by weight based on the weight of the prepolymer reactants.

Claim 5 has been amended as follows:

5. (Amended) The method as set forth in claim 1 [or 2], wherein said hydrophilic moiety for water dispersion is used at an amount of 8-10 parts by weight based on the weight of the prepolymer reactants.

Claim 7 has been amended as follows:

7. (Amended) The method as set forth in claim 1 [or 2], further comprising the step of adding acetone and/or n-pyrrolidone solvent at an amount 10 % by weight based on the weight of the prepolymer reactants, before the dispersing step.

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Claim 8 has been amended as follows:

8. (Amended) The method as set forth in claim 1 [or 2], wherein said polyol is a polybutylene adipate based polyester polyol with a molecular weight of 500-3,000.

Claim 9 has been amended as follows:

9. (Amended) The method as set forth in claim 1 [or 2], wherein said diisocyanate is selected from the group consisting of diphenylmethane diisocyanate, isophorone diisocyanate, and tolylene diisocyanate.

Claim 10 has been amended as follows:

10. (Amended) The method as set forth in claim 1 [or 2], wherein said amine is triethyl amine.

Claim 11 has been amended as follows:

11. (Amended) The method as set forth in claim 1 [or 2], wherein said chain extender is selected from the group consisting of glycols, such as ethylene glycol, 1,4-butylene glycol, and 1,6-hexane diol, diamines, such as ethylene diamine and isophorone diamine, triols such as trimethylol propane, and mixtures thereof.

Claim 13 has been amended as follows:

(Amended) [13.] 12. A method of surface treatment [of] for chromated, electroplated steel plates, comprising the steps of: [coating, on an] providing a zinc-electroplated steel plate chromated at a chrome amount of 4-200 mg/m², [the] coating said steel plate with an aqueous lubricant urethane resin at a dry coating thickness of 0.5-5.0 μ m, baking the steel plate at a steel temperature of 110-200 °C, and quenching the steel plate in water.

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